

Survey and Analysis of Health Information Services for Older Adults in U.S. Public Libraries: Postprint

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Abstract

[Objective/Significance] To investigate and analyze the current status of health information services for older adults in American public libraries, and to provide references for Chinese public libraries to develop related services. [Method/Process] Using web-based survey methods, combined with literature review, interviews, and case analysis, this study selected the top 25 public libraries by service population, using the presence of specialized health information services for older adults as the sampling criterion, and analyzed the current status and characteristics of services in the 14 selected libraries. [Results/Conclusion] Health information services for older adults in American public libraries exhibit the following characteristics: adherence to standardized service processes; segmentation of older adult user groups with emphasis on 50+ users; relatively concentrated thematic content in health information services to meet users' information needs; and a primary goal of improving users' health literacy, particularly e-health literacy.

Full Text

Preamble

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Investigation and Analysis of Senior Health Information Services in American Public Libraries*

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Abstract

[Purpose/Significance] This study investigates and analyzes the current state of senior health information services in American public libraries to provide reference for the development of related services in Chinese public libraries. **[Method/Process]** Using web-based survey methods combined with literature review, interviews, and case analysis, this study selected 14 libraries from the top 25 public libraries ranked by legal service area population, based on whether they provide specialized senior health information services. The current status and characteristics of services in these selected libraries were analyzed. **[Result/Conclusion]** Senior health information services in American public libraries exhibit the following features: adherence to standardized service procedures; segmentation of senior user groups with emphasis on 50+ users; relatively concentrated themes in health information services to meet user information needs; and a primary goal of improving user health literacy, particularly e-health literacy.

Keywords: public library; senior health information service; e-health literacy; America

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Introduction

According to international standards, a country or region is considered aging when its population aged 65 and over exceeds 7% of the total population. China has experienced accelerated population aging in recent years. In 2000, the proportion of Chinese citizens aged 65 and above reached 7%; by the end of 2014, this population had grown to 137 million, representing 10.1% of the total population, making China the country with the largest elderly population in the world. The United States entered an aging society earlier than China—in the 1940s, the U.S. population aged 65 and over already exceeded 7% of the total population. Over the subsequent 70+ years, various sectors in the United States, including the library community, have continuously explored strategies to address population aging, particularly the aging of the “baby boom” generation, accumulating rich experience. The baby boom refers to the “1946-1964” phenomenon in the United States, during which 76 million people were born, accounting for approximately one-third of the total U.S. population. It is projected that by 2030, about 20% of the U.S. population will be aged 65 and over, with some states reaching as high as 25%.

Similar to the U.S. baby boom, China’s population born in the 1950s and 1960s constitutes a large proportion and currently represents the backbone of Chinese society, but this cohort will gradually age. As elderly individuals from different eras exhibit different characteristics, it is crucial for public libraries to research and implement effective measures to actively address aging in the information age.

In ranking the subjects of information needed by American public library users, health science ranks first. The main reasons include: First, adults in their fifties and sixties gradually pay more attention to health or begin experiencing health issues, and as life expectancy continues to increase, the number of people in this age group and beyond is growing, leading to increased demand for health information among elderly users and those concerned about aging. Second, due to the accelerated pace of modern life and rising labor costs, doctors have limited time for each patient, making the traditional channel of obtaining health information from physicians potentially insufficient to fully meet user needs. Third, although a large amount of online health information exists, much of it is difficult for non-professionals to access, interpret, or verify. Since the 1990s, driven by government policies, the library's own mission, and user demand, some American public libraries have become community centers for health information resources and even health literacy education through the provision of health information services.

This study adopts the term “seniors” rather than “elderly” for two reasons: First, through searching library websites, it was found that American public libraries commonly use the term “senior” when classifying user groups, rarely using “older adult” or “elder.” The Chinese translation of “senior” carries meanings such as “older person” or “elder.” Second, in practice, to actively respond to aging, American public libraries have lowered the age threshold for senior user groups to “50+.” Therefore, this paper considers “seniors” more appropriate, although the term “elderly” is inevitably used in some contexts.

1. Basic Investigation of Senior Health Information Services in American Public Libraries

1.1 Research Methods

This study employs web-based surveys combined with literature review, interviews, and case analysis to investigate and analyze senior health information services in American public libraries.

1.1.1 Web-Based Survey Method The study selected the top 25 public libraries ranked by the American Library Association (ALA) according to legal service area population as survey subjects. Using a combination of browsing website directories and keyword searches, the study examined whether libraries had directories for “senior,” “older adult,” “elder,” “elderly,” “50+,” “health,” or “wellness,” supplemented by site-specific keyword searches. The survey found that 14 libraries provided specialized health information services for seniors, accounting for 56%. Specialized services refer to those with explicit senior user groups in website directories and health information services targeted at these groups. It should be noted that all 25 libraries serve populations exceeding 1 million, while nearly 80% of American public libraries serve populations of less than 25,000. Theoretically, the larger the population served, the more likely

libraries are to segment user groups.

1.1.2 Literature Review Method Using resources from the University at Buffalo Libraries, the author conducted a comprehensive search of literature on public library health information services and senior services in the United States since the 1990s. The review revealed that American public libraries have placed considerable emphasis on health information services for adults over the past two decades, with numerous case studies. Influential works include *Consumer Health Information for Public Librarians*, *50+ Library Services: Innovation in Action*, *Libraries and the Affordable Care Act*, and *Promoting Individual and Community Health at the Library*. Representative case studies include the East Brunswick Public Library in New Jersey and the New Haven Free Public Library in Connecticut. To understand domestic research status, the author searched CNKI and found limited research on public library health information services, with particularly scarce literature on senior health information services in American public libraries.

1.1.3 Field Visits and Interviews The author visited seven public libraries of different scales in the United States and consulted relevant librarians to verify and supplement information obtained through web surveys. These libraries included the New York Public Library Main Library and its 53rd Street Branch, Brooklyn Public Library (BPL) Main Library, Queens Flushing Public Library, Buffalo & Erie County Public Library (B&ECPL) Main Library and Eggertsville-Snyder Branch, and Hershey Public Library in Pennsylvania. The investigation found that all four main libraries had dedicated staff responsible for senior health information services, while the two branch libraries and one town-level library provided health information resource lending and computer training services but lacked specialized health information services for seniors. Librarians at the Eggertsville-Snyder Branch and Hershey Library explained that due to their small scale and limited staff, they only offered conventional library services.

1.1.4 Case Analysis Method When summarizing the characteristics of American public library health information services, this study incorporates case analysis.

1.2 Basic Situation

As mentioned above, through multiple searches and repeated verification of directories and keywords on the websites of the top 25 ALA-ranked libraries, the author identified 14 libraries that provided senior health information services (see).

As shown in , regarding directory distribution, except for the Los Angeles Public Library which places its services under a first-level directory, the remaining

13 libraries concentrate senior health information services under four main categories: resources, services, learning, and activities, typically at the third or fourth level of their website hierarchies. In terms of user terminology, eight libraries use “seniors” or “senior adults,” four use “50+,” and two use “older adults.” During interviews, librarians also indicated that “seniors” is their customary term for elderly users. Regarding dedicated webpages, seven libraries have established specialized senior services pages: New York Public Library, Brooklyn Public Library, Queens Public Library, San Antonio Public Library, Las Vegas-Clark County Library, Free Library of Philadelphia, and King County Library System (KCLS). In terms of staffing, some libraries have established dedicated departments or full-time personnel for senior services, with some receiving special funding, such as Brooklyn Public Library and Free Library of Philadelphia. Regarding user segmentation, eight libraries have specialized services for 50+ users. In terms of service programs, website information shows that senior health information services mainly include resource-based and activity-based programs. Resource-based services involve thematic bibliographies, databases, and links to authoritative websites tailored to user information needs. Activity-based programs are provided in two ways: directly by the library, such as one-on-one computer training; or through partnerships where the library promotes programs, provides venues, and collaborates with relevant organizations, such as yoga classes. The thematic content of both resource and activity services is relatively concentrated. Libraries also provide information consultation services, such as “ask a librarian” desks at reference counters and instructions in library service brochures on how to “book a librarian.” Service themes primarily focus on healthy aging, active aging, and creative aging.

[TABLE:1 content appears here in the original text as a list format]

2. Senior Health Information Services in American Public Libraries

2.1 Adherence to Standardized Service Procedures

2.1.1 Basic Service Procedures Through field visits and literature review, the author found that American public libraries have developed standardized procedures for health information services, which mainly include: (1) Community surveys covering geographic location, basic demographic information of residents, local hospitals, and relevant organizations. Due to high population mobility in American communities, such surveys are generally conducted every five years. (2) Mission and goal setting, typically expressed as meeting the health and medical information needs of all community members to improve and enhance residents’ health levels. (3) Identification of target user groups, based on investigating community residents’ health status, health information needs, and health information behaviors, to clarify health disparities among populations and identify user groups in urgent need of services for targeted delivery. (4) Planning of funding, facilities, and personnel, with qualified libraries arrang-

ing special funds, establishing dedicated departments, and recruiting health information librarians. (5) Service program design and delivery, with public libraries designing health service programs mainly in two categories: health information resource collection and services, and activity programs. (6) Marketing and promotion of service programs through various media channels. (7) Service effectiveness evaluation, where libraries collect statistics and showcase user feedback and testimonials through videos and other formats, creating demonstration effects through simple yet effective personal narratives. (8) Continuous improvement and refinement of health information services based on user feedback. The basic service procedure is illustrated in [Figure 1: see original paper].

2.1.2 Case Study: Brooklyn Public Library As the fifth largest library system in the United States, Brooklyn Public Library established its aging services department—“Services to the Aging”—in the late 1970s, complete with its own office and staff. With funding from multiple sources including the New York State Education Department’s Coordinated Outreach Library Services and the Charles H. Revson Foundation, and by following the workflow from community survey to service evaluation, BPL’s senior services have become a model in the American library community due to their standardized delivery and the quantity and quality of programs offered.

Since the 1990s, BPL’s research has revealed that the image of middle-aged and elderly people in the information age differs from that of previous eras. The new generation of seniors has habits of searching for information online, prefers mobile communication, and actively participates in activities. Leveraging its long-accumulated experience and foundation, BPL strives to provide corresponding services for seniors. According to the author’s statistics, during June-August 2018, BPL (including its branches) held 50 health information service activities monthly for seniors. These programs primarily included: computer and internet basics training to improve digital information literacy, such as Internet and email security, Microsoft Excel, and Microsoft Word fundamentals; moderated exercise programs led by professionals, such as yoga; blood pressure measurement and heart health seminars in partnership with medical institutions; and numerous creative aging activities for senior users as a member of the Lifetime Arts Affiliate Network, including gardening, crafts, concerts, and film screenings.

2.2 Segmentation of Senior User Groups with Emphasis on 50+ Users

2.2.1 Research and Services for 50+ Users Current human life expectancy has exceeded any period in history, prompting research from political science, sociology, economics, demography, medicine, and library science perspectives. Some scholars argue that public libraries should segment senior users by age to provide more targeted services. Recommendations include dividing them into three age groups: 50-64, 65-79, and 80+, as users in different age groups have varying information needs. For example, 50-64 year-old users have

needs not only for health information but also for employment and investment information. Other scholars suggest dividing them into two groups: 50-80 and 81+, considering 50-80 as middle age, with the baby boom generation falling within this range.

To proactively address the aging of the baby boom generation, many public libraries emphasize the information needs of 50+ users. New York Public Library, Brooklyn Public Library, King County Library System, and Riverside County Library System demonstrate attention to the 50+ group in their website directories. Some programs at San Antonio Public Library, Las Vegas-Clark County Library, Free Library of Philadelphia, and Hawaii State Public Library System are specifically designed for baby boomers or 50+ users.

2.2.2 Case Study: King County Library System The King County Library System in Washington State has long been regarded as a model for people's libraries. Serving a population of over 1.4 million, KCLS recorded 22.4 million items circulated in 2010 (higher than any other U.S. library), 10.19 million library visits, over 100,000 new library cards issued, 31 million website visits, and more than 77,000 participants in library activities. This record earned the library the Gale/Library Journal Library of the Year award in 2011.

To meet evolving information needs, KCLS launched a future services strategy, developing a series of service plans through three channels: physical libraries, community outreach, and online services. In 2015, KCLS statistics revealed that 28.3% of cardholders were aged 50 and above, prompting the addition of corresponding services for this demographic. KCLS encourages people of all ages to pursue their dreams and strive for optimal lifestyles, as personal growth should never stop. To promote its services, KCLS publishes monthly library activity schedules in the local newspaper with the largest circulation targeting 50+ readers and distributes them free of charge at over 1,000 community centers and branch libraries.

The author conducted a statistical analysis of KCLS's planned activities for 50+ users from July to December 2018. Within six months, 100 activities were scheduled with rich thematic content covering eight areas: social services; work and careers; citizenship, business, law, and finance; computers and technology; health and science; arts and performance; games and entertainment; and book clubs. Health and science activities comprised four themes, held at different times and branches for a total of 10 sessions, accounting for 10% of all activities (see).

[TABLE:2 content appears here in the original text]

2.3 Thematic Content of Health Information Services

As summarized above, American public library websites show that senior health information services mainly include information resource services and activities. Through statistical analysis of the thematic content of senior health information

services from the 14 libraries in , combined with interviews and literature analysis, American public libraries generally emphasize the following four themes in designing online health information resources and activity programs:

2.3.1 Personal Health Management Public demand for personal health management, disease prevention, or information on aging-related diseases has increased. Public libraries place great emphasis on information services related to nutrition, weight management, fitness, healthy lifestyles, disease prevention, and alternative therapies. Among the 14 libraries in , 12 provide personal health management information services.

2.3.2 Medical Insurance and Benefits As public attention to national medical insurance and benefits continues, American librarians are working to adapt to and meet user requests for information on federal and state government policies, identifying user needs and helping them find information resources on insurance eligibility, applications, and related benefits. In , seven libraries provide medical insurance-themed information, with the Free Library of Philadelphia offering specialized information services on the Affordable Care Act following its implementation.

2.3.3 Mental Health Over the past decade, the medical community has paid close attention to cognitive and behavioral changes during aging, with growing research on memory and Alzheimer's disease prevention. Many libraries actively promote activities related to active aging and creative aging, such as music, film, art, crafts, lectures, and volunteer opportunities, providing important support for healthy aging through lifelong learning and social engagement. Additionally, information on arthritis, fall prevention, bone health, heart health, and mental health has also received library attention. In , six libraries provide information services on these topics.

2.3.4 Public Health Health is not only a medical issue but also a significant social and economic concern. Public health conditions such as food safety and flu prevention affect both individual health and society as a whole. For example, B&ECPL conducted a specialized flu prevention information service in spring 2018.

2.4 Goal of Improving User Health Literacy

2.4.1 American Public Libraries and User Health Literacy Compared to younger people, seniors have stronger needs for health information. However, the proportion of seniors with high health literacy is relatively low. U.S. survey data shows that populations with lower health literacy are concentrated among those aged 65 and above, with significant racial disparities. Health literacy refers to an individual's ability to obtain, process, and understand needed

health information and services to make appropriate health decisions. The definition emphasizes individual capabilities, including not only listening, speaking, reading, writing, and numeracy skills but also the ability to evaluate health information and use it to formulate health decisions. Culture and society, healthcare systems, and education systems are the three main influencing factors of health literacy. In 2010, the United States developed the *National Action Plan to Improve Health Literacy*, which proposed a series of goals and strategies, including supporting and expanding adult education and English language instruction in communities, as well as providing culturally and linguistically appropriate health information services to improve health literacy for all.

American public libraries have long been committed to improving adult literacy and computer application skills. As health literacy has become a hot topic in current American health initiatives, especially state libraries have launched e-health literacy education for seniors, such as training on using health information databases and searching for and evaluating internet health information. The Louisiana Public Library offered courses for seniors based on the NIH Senior Health Toolkit for Trainers, with pre- and post-training test results showing improved e-health literacy among seniors. The Maryland Public Library's training programs on MedlinePlus and NIH Senior Health databases for seniors showed that post-training surveys indicated significantly reduced computer anxiety levels, with over 75% of participants reporting positive impacts on their health decision-making.

To support public libraries in delivering health literacy services, the National Network of Libraries of Medicine collaborated with the American Library Association to develop a new health literacy toolkit. This toolkit provides customized tools for library professionals to raise public awareness of how libraries can support community health literacy and helps librarians guide community members to trustworthy health information. The ALA Health Literacy Toolkit covers nine areas: health literacy and decision-making, health literacy and community, health literacy and family, health literacy and nutrition, health literacy and aging, health literacy and chronic disease, health literacy and rare diseases, health literacy and fake news, and health literacy and multiple languages. Libraries can provide information resources and activity programs in these nine areas to enhance public health literacy.

2.4.2 Case Study: South Philadelphia Library To adapt to 21st-century users, the Free Library of Philadelphia established five innovative service pilots, one of which is the South Philadelphia Library—the first health-themed branch. This branch was rebuilt as a community library with the goal of promoting user health literacy and reopened to the public in 2016. To highlight health information services, the branch is located on the first floor of the South Philadelphia Community Health and Literacy Center. Within the same building are the Philadelphia Department of Public Health Care Center branch and the Children's Hospital of Philadelphia's South Philadelphia Primary Care Center,

forming a geographically co-located community health and literacy partnership model. Additionally, the library established a Community Health Resource Center, subscribing to health-related information resources including consumer health information databases, books, and periodicals. It also specially appointed a Community Health Librarian and a Health Programs and Partnerships Manager. The Community Health Librarian is a certified consumer health information specialist responsible for assisting users in finding and evaluating health information. The Health Programs and Partnerships Manager has a public health professional background and is responsible for designing and implementing the branch's health literacy programs. The library has hosted nutrition workshops, diabetes prevention programs, CPR projects, and health storytime activities.

Practice has proven that this “co-location model” has attracted community seniors' attention to library services, increased library user numbers, and complemented services provided by other institutions in the same building. Since its opening in June 2016, the branch has consistently registered the most new library cards among all branches except the main library. The library's physical location within the Community Health and Literacy Center creates a synergistic effect in enhancing user health literacy.

Conclusion

Population aging is a global issue, and aging in the information age differs from any previous period. How to age healthily concerns not only individuals but also the happiness index of society as a whole. Against the backdrop of Healthy China becoming a national strategy and increasing public health awareness, demand for high-quality health information continues to grow. As community information centers, public libraries face important questions: How can they take effective measures to meet public health information needs? How can they better conduct user health literacy education to improve health literacy levels? Although some Chinese public libraries provide health information resources and activity-based services for elderly users, there remains considerable room for development if these are to be implemented as specialized programs. American public libraries have actively explored specialized senior health information services, offering several reference strategies: (1) Standardize work procedures, particularly focusing on initial steps such as community surveys and target user group analysis to clarify the “4Ws”: Who needs public library health information services, why they need them, what they need, and when they need it. Additionally, promoting service programs and evaluating service effectiveness are crucial components. (2) Segment user groups, with particular focus on researching the health information needs characteristics of 50+ users to provide more effective services. Generally, the health information needs of 50+ and 80+ users differ, especially as 50+ users in the information age exhibit new characteristics in health information behavior. (3) Thematic content of service programs should be relatively concentrated. Health science is vast and profound, with health information resources being large in quantity, diverse in type, and broad

in scope. Thematic content for senior health information services should focus on healthy aging, active aging, and creative aging. (4) Health information services should aim to improve user health literacy, particularly e-health literacy. As health literacy is an interdisciplinary field, training generally adopts collaborative approaches. For example, health lectures and fitness activity programs offered by public libraries cooperate with relevant professional organizations to achieve the goal of improving community residents' health literacy levels.

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Note: Figure translations are in progress. See original paper for figures.

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